Remarks

Claims 1-24 are pending in the present application and are rejected.

Claims 3 and 16 are cancelled.

Claims 1, 15, and 23 are amended to make it clear that the non-reactive liquid (or the liquid nitrogen) is removed by evaporation. These amendments merely represent incorporation of independent claim 3 into claim 1 and 33, and independent claim 16 into claim 15.

1. Rejection Under 35 U.S.C. 103(a)

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepodd et al. (U.S. Patent No. 6,110,397).

Applicants respectfully traverse this rejection under 103(a) for the following reasons. The Examiner has misconstrued each (and every) step of the present invention in order to sustain his rejection over Shepodd. Shepodd does not disclose a process of making a supported catalyst from a liquid catalyst in which efficient dispersion is obtained by freezing said liquid catalyst in a non-reactive liquid, and then contacting the frozen catalyst with a support in the non-reactive liquid. It is significant that the catalyst and the support are first contacted within the non-reactive liquid that is at a sufficiently low temperature to freeze the liquid catalyst. Finally, independent claims 1, 15, and 23 are amended such that the non-reactive liquid is removed by evaporation.

Shepodd does not disclose a process in which the non-reactive liquid is removed by evaporation. Instead, the non-reactive liquid (i.e., the solvent used to perform the freezing) is removed by a combination decanting and draining.

> The frozen beads of carbon/Pd, polybutadiene suspension were then recovered from the liquid nitrogen bath by **decanting the Dewar just enough so as to leave a slight excess liquid nitrogen filling the interstitial space between each of the beads.**
>
> Powder Recovery
>
> Immediately following decanting the liquid nitrogen, the frozen beads were prepared for freeze-drying. Several 100 cc plastic beakers were pre-cooled with liquid nitrogen. The free flowing collection of beads were divided between the pre-cooled containers in order to keep bead bed depth small (total volume of beads .about.30 cc). The **remaining liquid nitrogen was drained** and the containers quickly transferred to a freeze drier.
>
> Shepodd, col. , ll.

The Specification further clarifies that evaporation is accomplished by warming of the non-reactive liquid. (Specification, page 4, ll. 8-10). This is necessary for evaporation to occur at an appreciable rate. Accordingly, for at least this reason claims 1-24 are allowable under 35 U.S.C. 103(a) over Shepodd et al.

Notwithstanding the argument set forth above, the mixing of the "allegedly" analogous components to the liquid catalyst and solid support in Shepodd does not occur in the manner and in the sequence required by independent claims 1, 15, and 23. Instead, as set forth in Embodiment 2 of Shepodd the components are mixed before exposure to the low temperature non-reactive liquid:

> In contrast to the prior art, the instant invention embodies a process which involves: 1) dissolving the hydrogen active polymers in a solvent, 2) **mixing the solution with a catalyst,** 3) adding additives or diluents to modify the solvent/solute phase separations (these additives are intended to modify the end product's final physical/mechanical and/or chemical properties), and 4) **introducing the liquid solution suspension as droplets into a cryogenic liquid** where these droplets are quickly frozen.
>
> . .

Shepodd et al, col. 12, ll. 11-20 (emphasis added)

Although the Examiner seeks to trivialize the differences between Shepodd and the present invention, any chemist would appreciate that mixing components at low temperatures is a very different process than mixing at room temperature. The significance is highlighted by the fact that the catalyst which was previously in a liquid state is now frozen. Table 1 provides a side-by-side comparison of the process disclosed by Shepodd and independent claim 1:

Sheopodd	Present Invention
"1) dissolving the hydrogen active polymers in a solvent,	
2) mixing the solution with a catalyst,	
3) adding additives or diluents to modify the solvent/solute phase separations (these additives are intended to modify the end product's final physical/mechanical and/or chemical properties), and	
4) introducing the liquid solution suspension as droplets into a cryogenic liquid where these droplets are quickly frozen."	dispersing the liquid catalyst in a non-reactive liquid, the non-reactive liquid being at a sufficiently low temperature to freeze the liquid catalyst to form a frozen catalyst;
	dispersing a solid carrier in the non-reactive liquid wherein the frozen catalyst contacts the solid carrier; and
The frozen beads of solution are then transferred to a vacuum chamber where the solvent is removed below the freezing point of the suspension by freeze-drying.	removing the non-reactive liquid.

The comparison provided in Table 1 makes it clear that the Shepodd process is different. The present invention does not premix the components as disclosed in steps 1), 2) and 3) of Shepodd. Because such a mixture is not formed, the liquid catalyst and the solid carrier are added directly to the non-reactive liquid.

Accordingly for at least these additional reasons, claims 1-24 are patentable under 35 U.S.C. 103(a) over Shepodd et al. (U.S. Patent No. 6,110,397).

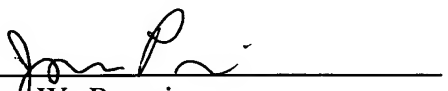
Conclusion

Applicants have made a genuine effort to respond to each of the Examiner's rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If a telephone or video conference would help expedite allowance or resolve any additional questions, such a conference is invited at the Examiner's convenience.

The Commissioner is authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

Sandor Nagy et al.

By 

James W. Proscia
Reg. No. 47,010
Attorney/Agent for Applicant

Date: November 21, 2005

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351